AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et seq.; the "Act") and Chapter 342D, Hawaii Revised Statutes, and Chapters 11-54 and 11-55, Administrative Rules, Department of Health (DOH), State of Hawaii,

CITY AND COUNTY OF HONOLULU
BOARD OF WATER SUPPLY

(hereinafter PERMITTEE),

is authorized to discharge dewatering and disinfection water associated with the removal of spent granular activated carbon (GAC); defining, backwash, forward flushing, and backwash tank rinse water associated with the preparation of new GAC beds; backwash and refreshing water associated with maintenance of the GAC beds; and pump blow-off water through Outfall Serial No. 001,

located at Latitude 21°34'58" N and Longitude 158°06'11" W,

to the receiving waters named the Opaeula Stream,

from its Haleiwa Wells GAC Treatment Facility (hereinafter "FACILITY"),

located in Haleiwa, Maui, TMK: 1-6-004-001:009, and

in accordance with the effluent limitations, monitoring requirements and other conditions set forth herein, and in the attached DOH "Standard NPDES Permit Conditions" dated December 31, 2002.

All reference to Title 40 of the Code of Federal Regulations (CFR) are to regulations that are in effect on July 1, 2001, except as otherwise specified. Unless otherwise specified herein, all terms are defined as provided in the applicable regulations in Title 40 of the CFR.

This permit will become effective on _____.

This permit and the authorization to discharge will expire at midnight, five (5) years from the date of issuance.

Signed this ___ day of _____, 2004.

_____
(For) Director of Health

TABLE OF CONTENTS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the effective date of this permit and lasting until **five (5) years from the date of issuance of this permit**, the Permittee is authorized to discharge dewatering and disinfection water associated with the removal of spent granular activated carbon (GAC); defining, backwash, forward flushing, and backwash tank rinse water associated with the preparation of new GAC beds; backwash and refreshing water associated with maintenance of the GAC beds; and pump blow-off water through Outfall Serial No. 001. The discharges shall be limited and monitored by the Permittee as specified below.

1. Backwash Tank Discharges (defined as dewatering water associated with the removal of spent granular activated carbon (GAC); defining, backwash, rank rinsing and forward flushing, water associated with the preparation of new GAC beds; backwash and refreshing water associated with maintenance of the GAC beds)

Parameter	Discharge Limitation	Unit	Minimum Frequency	Sample Type
Flow	N/L	Gallons	Once/Month[1]	Estimated or Calculated
Total Suspended Solids	20	mg/l	Once/Month[1]	Grab[2]
Turbidity	5.0[3] 2.0[4]	NTU	Once/Month[1]	Grab[2]
pH Range	5.5 - 8.0	Standard Units	Once/Month[1]	Grab[2,5]

N/L No limitation. Only monitoring and reporting required.
mg/l Milligrams per liter
NTU Nephelometric turbidity units

[1] "Once/Month" shall mean once per calendar month.
[2] A grab sample means an individual sample collected at a randomly-selected time over a period not exceeding 15 minutes.
[3] This limitation shall be in effect during the wet season (November 1 to April 30).
[4] This limitation shall be in effect during the dry season (May 1 to October 31).
[5] The Permittee shall measure the pH within 15 minutes from the time the sample was taken.

2. Disinfection WaterDischarges

Parameter	Discharge Limitation	Unit	Minimum Frequency	Sample Type
Flow	N/L	Gallons	Once/Discharge	Estimated or Calculated
Total Suspended Solids	20	mg/l	Once/Discharge	Grab[1]
Turbidity	5.0[2] 2.0[3]	NTU	Once/Discharge	Grab[1]
pH Range	5.5 - 8.0	Standard Units	Once/Discharge	Grab[1,4]
Total Residual Chlorine	19.0	µg/l	Once/Discharge	Grab[1]

N/L No limitation. Only monitoring and reporting required.
mg/l Milligrams per liter
NTU Nephelometric turbidity units

[1] A grab sample means an individual sample collected at a randomly-selected time over a period not exceeding 15 minutes.
[2] This limitation shall be in effect during the wet season (November 1 to April 30).
[3] This limitation shall be in effect during the dry season (May 1 to October 31).
[4] The Permittee shall measure the pH within 15 minutes from the time the sample was taken.

3. Pump Blow-Off Water

Parameter	Discharge Limitation	Unit	Minimum Frequency	Sample Type
Flow	N/L	Gallons	Once/Month[1]	Estimated or Calculated
Total Suspended Solids	20	mg/l	Once/Month[1]	Grab[2]
Turbidity	5.0[3] 2.0[4]	NTU	Once/Month[1]	Grab[2]
Dibromochloro-propane	N/L	µg/l	Once/Month[1]	Grab[2]

Parameter	Discharge Limitation		Unit	Minimum Frequency	Sample Type
Trichloropropane	N/L		µg/l	Once/Month[1]	Grab[2]
pH Range	5.5 - 8.0		Standard Units	Once/Month[1]	Grab[2,5]
Whole Effluent Toxicity[6]	Acute	80% Survival in 100% Effluent		Once/Month[1]	Grab[2]
	Chronic	No Observed Effect in 100% Effluent			

N/L No limitation. Only monitoring and reporting required.
mg/l Milligrams per liter
NTU Nephelometric turbidity units
µg/l Micrograms per liter

[1] "Once/Month" shall mean once per calendar month.
[2] A grab sample means an individual sample collected at a randomly-selected time over a period not exceeding 15 minutes.
[3] This limitation shall be in effect during the wet season (November 1 to April 30).
[4] This limitation shall be in effect during the dry season (May 1 to October 31).
[5] The Permittee shall measure the pH within 15 minutes from the time the sample was taken.
[6] The Permittee shall perform whole effluent toxicity testing in accordance with Part B of this permit. The Permittee shall perform acute toxicity testing or chronic toxicity testing using 100% effluent.

4. Other Requirements

a. The Permittee shall use only GAC-treated water for backwashing the GAC contactors and disinfection and rinsing of the backwash tank.

b. The Permittee shall conduct monitoring in accordance with test procedures approved under 40 CFR Part 136 with detection limits low enough to measure compliance with the discharge limitations specified in the table above. For cases where the discharge limitation is below the lowest detection limit of the appropriate test procedure, the test method with the lowest detection limit shall be used.

c. The Permittee shall periodically evaluate the treatment system in order to ensure compliance with the limitations specified above and the basic water quality

criteria as specified in Section 1 of the attached Standard NPDES Permit Conditions.

B. WHOLE EFFLUENT TOXICITY LIMITATIONS AND MONITORING REQUIREMENTS

1. The Permittee shall perform acute or chronic toxicity testing in accordance with Parts B.1.a or B.1.b of this permit.

   a. Acute Toxicity Testing

      (1) Limitation

      The acute toxicity discharge limitation is specified in Part A.3 of this permit. Acute toxicity is defined by less than 80% species survival in 100% effluent.

      (2) Testing Procedures

         (a) The Permittee shall conduct the acute toxicity testing in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (EPA-821-R-02-012, Fifth Edition, October 2002).

         (b) If necessary, the Permittee may adjust the salinity of a discharge using salts to allow testing with marine species.

         (c) If the Permittee uses static tests, the daily renewal solutions shall be fresh grab samples, unless samples are shipped off-island to a contract laboratory in which case one grab sample may be used for all renewals. The Permittee may conduct tests using locally available species at ambient temperature.

      (3) Species Selection

         (a) The Permittee shall select one species for monitoring from the Environmental Protection Agency (EPA) manual identified in Part B.1.b(1).

         (b) The Permittee shall submit the selection to the Director of Health (Director) for approval within 60 days from the issuance date of this permit.

         (c) The Permittee shall obtain written approval from the Director before changing the selected species after the initial notification.

b. Chronic Toxicity Testing

The Permittee shall conduct monthly chronic toxicity tests on flow-weighted 24-hour composite effluent samples in accordance with the procedures outlined below.

(1) Limitation

The chronic toxicity limitation is specified in Part A.3 of this permit. Chronic toxicity is defined as having observed effects on the test species when tests are conducted using 100% effluent.

(2) Test Species and Methods

The Permittee shall conduct chronic toxicity testing on *Ceriodaphnia dubia* using Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Freshwater Organisms (EPA-821-R-02-013, Fourth Edition, October 2002).

(3) Quality Assurance

(a) Reference toxicant tests shall be conducted using the same test conditions as effluent toxicity tests (i.e., same test duration, etc.).

(b) If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, then the Permittee must re-sample and re-test within approximately 14 days.

(c) Control and dilution water should be receiving water or lab water, as described in the test methods manual. If dilution water is different from culture water, then a second control using culture water shall also be tested.

(4) Exceptions

(a) If the Permittee experiences difficulty in obtaining gametes during a monitoring period, the Permittee shall document its efforts, communicate all attempts to the Director, and report all attempts on the discharge monitoring report for that monitoring period.

(b) It shall not be a violation of this permit if it can be proven to the Director's satisfaction that the inability to perform the tests as

described above was due to circumstances beyond the Permittee's control.

2. Toxicity Reduction Evaluation (TRE)

a. Preparation of Initial Investigation TRE Workplan

The Permittee shall submit an initial investigation TRE workplan (approximately 1-2 pages) within 120 days from the effective date of this permit. This workplan shall describe steps which the Permittee intends to follow in the event that toxicity is detected, and at a minimum, shall include the following:

(1) Description of the investigation and evaluation techniques that would be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency.

(2) Description of the facility's method of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in operation of the facility.

(3) Identification of who (e.g. contract laboratory, etc.) will conduct the evaluation if a toxicity identification evaluation (TIE) is necessary.

b. Additional (Accelerated) Toxicity Testing

(1) If toxicity (as defined) is detected, then the Permittee shall conduct six additional tests, one approximately every 14 days, over a 12-week period. Effluent sampling for the first test of the six additional tests shall commence within approximately 24 hours of receipt of the test results exceeding a toxicity discharge limitation.

(2) However, *if implementation of the initial investigation TRE workplan indicates the source of toxicity* (e.g., a temporary plant upset, etc.), then the Permittee shall conduct only the first test of the six additional tests required above. If toxicity (as defined) is not detected in this first test, the Permittee may return to the normal sampling frequency required in Part A.1.of this permit. If toxicity (as defined) is detected in this first test, then Part B.2.c. of this permit shall apply.

(3) If toxicity (as defined) is not detected in any of the six additional tests required above, then the Permittee may return to the normal sampling frequency required in Part A.3 of this permit.

c. Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE)

(1) If toxicity (as defined) is detected in any of the six additional tests, then, based on an evaluation of the test results and additional available information, the Director may determine that the Permittee shall initiate a TRE, in accordance with the Permittee's initial investigation TRE workplan. Moreover, the Permittee shall develop and submit to the Director for approval a detailed TRE workplan which includes:

(a) Further actions to investigate/identify the cause(s) of toxicity.

(b) Actions the Permittee has taken/will take to mitigate the impact of the discharge, to correct the noncompliance, and to prevent the recurrence of toxicity.

(c) Schedule under which these actions will be implemented.

(2) As part of this TRE process, the Permittee may initiate a TIE using the test methods manuals, EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA/600/R-92/081 (Phase III), to identify the cause(s) of toxicity.

(3) If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required by Part B.2.b of this permit, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE.

3. Reporting

a. The Permittee shall submit a full report of toxicity test results, including any toxicity testing required by Parts B.2.b and B.2.c of this permit, with the Discharge Monitoring Report (DMR) for the month in which the toxicity tests are conducted. A full report shall consist of: (1) toxicity test results; (2) dates of sample collection and initiation of each toxicity test; and (3) toxicity discharge limitation (or threshold value). Toxicity test results shall be reported according to the test methods manual chapter on Report Preparation.

If the initial investigation TRE workplan is used to determine that additional (accelerated) toxicity testing is unnecessary, these results shall be submitted with the DMR for the month in which investigations conducted under the TRE workplan occurred.

b. Within 14 days of receipt of test results exceeding a toxicity discharge limitation (or threshold value), the Permittee shall provide written notification to the Director of:

(1) Findings of the TRE or other investigation to identify the cause(s) of toxicity.

(2) Actions the Permittee has taken/will take, to mitigate the impact of the discharge and to prevent the recurrence of toxicity.

(3) Implementation schedule for corrective actions when corrective actions, including a TRE, have not been completed.

(4) Reason for not taking corrective action, if no action has been taken.

4. Sampling Frequency Reduction

a. If the Permittee has not violated the whole effluent toxicity limitation after completing 24 months of testing, the Permittee may request a reduction in monitoring frequency.

b. Any such reduction of the monitoring frequency must be approved by the Director in writing, and shall be at the Director's sole discretion.

c. A reduction in frequency to not less than once per year shall be considered a minor modification for the purposes of 40 CFR Part 124.

d. If the Permittee violates the whole effluent toxicity limitation after a reduction in monitoring frequency becomes in effect, the monitoring frequency shall return to once per month for the duration of the permit.

Nothing in Part B waives any remedy or penalty applicable under Chapter 342D, Hawaii Revised Statutes.

C. REPORTING REQUIREMENTS

1. Monitoring Results

   a. The Permittee shall summarize and report monitoring results on a Discharge Monitoring Report (DMR) Form (EPA No. 3320-1) in a format that allows direct comparison with the limitations and requirements of this permit.

   b. The Permittee shall submit separate monthly DMRs for backwash tank discharges, disinfection water, backwash tank rinse water, and pump blow-off water. The DMR shall be postmarked no later than the 28th day of the month following the completed monitoring period. If there was no discharge during the month, then the DMR shall so state.

   c. The Permittee shall submit duplicate signed copies of these, and all other reports required herein, to the Regional Administrator and the Director at the following addresses:

      (1) Regional Administrator
      U.S. Environmental Protection Agency
      Region 9, Water Division
      CWA Compliance Office (WTR-7)
      75 Hawthorne street
      San Francisco, CA 94105

      (2) Director of Health
      Department of Health
      Environmental Management Division
      Clean Water Branch
      919 Ala Moana Boulevard, Room 301
      Honolulu, HI 96814-4920

2. Noncompliance

   a. Oral Reports

      The Permittee shall orally notify the Clean Water Branch at (808) 586-4309 within 24 hours when the following occurs:

      (1) Any exceedance of a pollutant limitation.

      (2) Any noncompliance which may endanger human health or the environment.

(3) Any bypass or upset resulting in or contributing to a discharge to State waters.

b. Written Reports

(1) For those noncompliances requiring oral reporting under Part C.2.a, the Permittee shall submit a written noncompliance report within five (5) days of the time the Permittee becomes aware of the noncompliance. The report shall be submitted to the Clean Water Branch at the address listed in Part C.1.c.

(2) The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the amount of time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(3) The Director may waive the written report or the five-day deadline on a case-by-case basis if the oral report has been received within 24 hours of the noncompliance.

D. OTHER REQUIREMENTS

1. Schedule of Submission

   a. The Permittee shall submit the following to the Director within 60 days after the effective date of this permit:

      (1) An effluent monitoring program detailing the sampling requirements specified in Part A of this permit. The effluent monitoring program shall include the following:

         (a) Sampling locations.

         (b) Sampling procedures.

         (c) Test method to be used for each parameter.

         (d) Quality Assurance/Quality Control methods.

      (2) Whole effluent toxicity monitoring program detailing the requirements specified in Part B of this permit, including the type of testing to be conducted (acute or chronic) and the test species to be used.

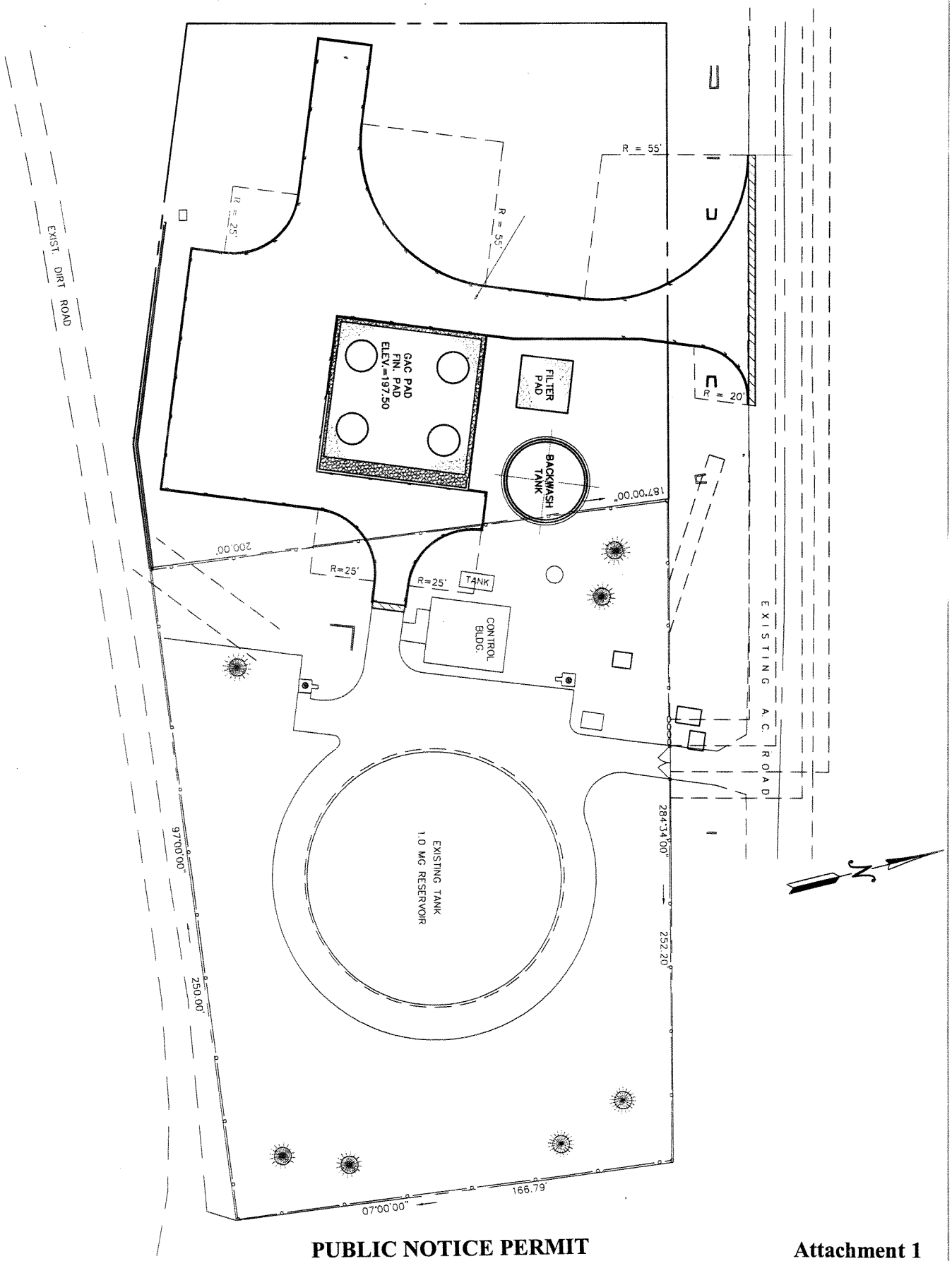
   b. The Permittee shall submit an initial investigation TRE workplan (approximately 1-2 pages) as specified in Part B of this permit within 120 days of the effective date of this permit.

2. Schedule of Maintenance

   The Permittee shall submit a schedule for approval by the Director at least 14 days prior to any maintenance of facilities which might result in exceedance of effluent limitations. The schedule shall contain a description of the maintenance and its purpose; the period of maintenance, including exact dates and times; and steps taken or planned to reduce, eliminate, and prevent occurrence of noncompliance.

E. LOCATION MAP

see attached



SITE PLAN FOR HALEIWA
SCALE: 1" = 20'-0"

DISCHARGE POINT
AT OPAEULA STREAM

18" DRAIN LINE

FACILITY LOCATION

PROJECT SITE – HALEIWA GAC

SCALE: 1:24,000